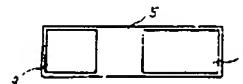


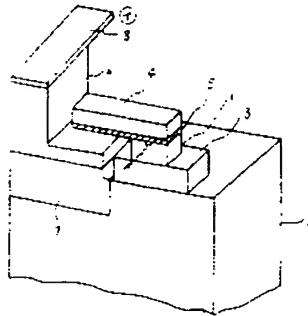
EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 60211992
 PUBLICATION DATE : 24-10-85



APPLICATION DATE : 06-04-84
 APPLICATION NUMBER : 59067639

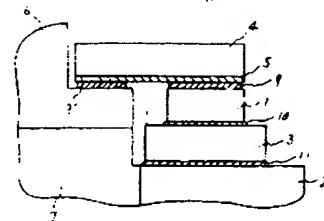


APPLICANT : HITACHI LTD;

INVENTOR : TOKUDA MASAHIKE;

INT.CL. : H01S 3/18 // H01L 21/58

TITLE : SEMICONDUCTOR LASER DEVICE



ABSTRACT : PURPOSE: To obtain a highly reliable semiconductor laser device of which heat resistance is decreased, by a method wherein at least one of Si, BeO and SiC is included as a composed element of a lead line which is taken out from another electrode of a laser chip.

CONSTITUTION: An N electrode of the laser chip 1 is soldered to a copper made heat sink block 2 which is applied gold deposit interposing, for instance, an electrically conductive Si submount, and at a P electrode of a chip metal layer 5 which is metallizing formed on the surface of a beam 4 is electrically connected to an outer lead terminal 8 by soldering. On this assembly, a laser chip 1 is fused to an Si submount 3 by AuSn type solder 10 and subsequently the submount is fused to a block 2 by AuSn type solder 11 of which melting point is low than that of solder 10. Consequentially, an electric lead is taken out from a P electrode using the metal layer 5 which is formed continuously depositing, for instance, Ti, Pt, Au and BLH 4 having PbSn type solder layer 9, 9' which is partly metallizing formed. Hereby, heat resistance of elements are remarkably decreased, and improvements of element quality and reliability will be possible.

COPYRIGHT: (C)1985,JPO&Japio